R E P O R T R E S U M E S

ED 016 929 AC 002 016

QUESTIONS AND OUTLINE FOR A COMPENDIUM OF PAPERS PROVIDING AN ECONOMIC ANALYSIS OF FEDERAL PROGRAMS FOR THE DEVELOPMENT OF HUMAN RESOURCES.

CONGRESS OF THE U.S., WASHINGTON, D.C.

PUB DATE 67

EDRS PRICE MF-$0.25 HC-$0.64 14P.

DESCRIPTORS- *FEDERAL PROGRAMS, *ECONOMICS, *HUMAN RESOURCES, *MANPOWER DEVELOPMENT, *PRIVATE AGENCIES, HEALTH SERVICES, FAMILY INCOME, PHYSICAL ENVIRONMENT, AIR POLLUTION CONTROL, EDUCATIONAL NEEDS, TRAINING OBJECTIVES, U.S. CONGRESS,

THE SUBCOMMITTEE ON ECONOMIC PROGRESS HAS PLANNED A COMPENDIUM OF PAPERS TO PROVIDE AN ECONOMIC ANALYSIS OF FEDERAL PROGRAMS OF HUMAN RESOURCE DEVELOPMENT AND THEIR RELATIONSHIP TO PROGRAMS IN THE PRIVATE SECTOR. THIS OUTLINE FOLLOWS THE FIRST PHASE OF THE SUBCOMMITTEE'S INVESTIGATION, A SURVEY OF FEDERAL PROGRAMS REPORTED IN "FEDERAL PROGRAMS FOR THE DEVELOPMENT OF HUMAN RESOURCES." PART I OF THE COMPENDIUM WILL BE AS ASSESSMENT OF THE DEVELOPMENT OF HUMAN RESOURCES IN THE AMERICAN ECONOMY AND GOALS FOR 1975. PART II WILL BE AN EXAMINATION OF PROGRAMS OF EDUCATION, TRAINING, AND MATCHING JOBS AND PEOPLE, INCLUDING AN INVENTORY OF EDUCATION AND TRAINING NEEDS NOT BEING MET, DESIGN OF PROGRAMS FOR MEETING EDUCATIONAL TRAINING GOALS, AND EVALUATION OF THE ECONOMIC EFFORTS OF SUCH PROGRAMS. PART III IS CONCERNED WITH THE ECONOMICS OF INCOME MAINTENANCE AND FAMILY SUPPORT. PART IV WILL COVER THE ECONOMICS OF HEALTH CARE AND IMPROVEMENT PROGRAMS, SUCH AS CARE AND TREATMENT OF THE ILL, PREVENTION OF ILLNESS, MEDICAL RESEARCH, TRAINING OF MEDICAL MANPOWER, AND BUILDING MEDICAL FACILITIES. PART V WILL PRESENT THE ECONOMICS OF ENVIRONMENTAL IMPROVEMENT AND THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND HUMAN ENVIRONMENT. THIS DOCUMENT, JOINT COMMITTEE PRINT 90TH CONGRESS, 1ST SESSION, IS ALSO AVAILABLE FROM THE U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402. 14 PAGES. (AJ)

ED016929

90th Congress
1st Session } JOINT COMMITTEE PRINT

FEDERAL PROGRAMS FOR THE DEVELOPMENT OF HUMAN RESOURCES:

QUESTIONS AND OUTLINE FOR A COMPENDIUM OF PAPERS PROVIDING AN ECONOMIC ANALYSIS

SUBCOMMITTEE ON ECONOMIC PROGRESS

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
9-915 WASHINGTON : 1967

AC002016

JOINT ECONOMIC COMMITTEE

(Created pursuant to sec. 5(a) of Public Law 304, 79th Cong.)

WILLIAM PROXMIRE, Wisconsin, *Chairman*
WRIGHT PATMAN, Texas, *Vice Chairman*

SENATE	HOUSE OF REPRESENTATIVES
JOHN SPARKMAN, Alabama	RICHARD BOLLING, Missouri
J. W. FULBRIGHT, Arkansas	HALE BOGGS, Louisiana
HERMAN E. TALMADGE, Georgia	HENRY S. REUSS, Wisconsin
STUART SYMINGTON, Missouri	MARTHA W. GRIFFITHS, Michigan
ABRAHAM RIBICOFF, Connecticut	WILLIAM S. MOORHEAD, Pennsylvania
JACOB K. JAVITS, New York	THOMAS B. CURTIS, Missouri
JACK MILLER, Iowa	WILLIAM B. WIDNALL, New Jersey
LEN B. JORDAN, Idaho	DONALD RUMSFELD, Illinois
CHARLES H. PERCY, Illinois	W. E. BROCK 3D, Tennessee

JOHN R. STARK, *Executive Director*
JAMES W. KNOWLES, *Director of Research*

ECONOMISTS

WILLIAM H. MOORE
JOHN B. HENDERSON
GEORGE R. IDEN
DANIEL J. EDWARDS

DONALD A. WEBSTER (Minority)

SUBCOMMITTEE ON ECONOMIC PROGRESS

WRIGHT PATMAN, Texas, *Chairman*

HOUSE OF REPRESENTATIVES	SENATE
MARTHA W. GRIFFITHS, Michigan	WILLIAM PROXMIRE, Wisconsin
WILLIAM S. MOORHEAD, Pennsylvania	J. W. FULBRIGHT, Arkansas
THOMAS B. CURTIS, Missouri	HERMAN E. TALMADGE, Georgia
W. E. BROCK 3D, Tennessee	LEN B. JORDAN, Idaho
	CHARLES H. PERCY, Illinois

CONTENTS

	Page
Introduction	1
Background	2
Compendium content	3
Joint Economic Committee reports and hearings relating to human resources	9
Compendium outline	11

FEDERAL PROGRAMS FOR THE DEVELOPMENT OF HUMAN RESOURCES: QUESTIONS AND OUTLINE FOR A COMPENDIUM OF PAPERS PROVIDING AN ECONOMIC ANALYSIS

INTRODUCTION

This outline for a compendium of papers is designed to carry forward the investigation by the Subcommittee on Economic Progress into the broad area of human resource programs of the Federal Government and their relationship to programs in the private sector. The subcommittee believes that in view of the increased role of the Federal Government in the human resource field, it is necessary to define and evaluate the economic aspects of the Government's programs and to clarify fundamental issues and concepts.

While analytical work has been done on the subject of investment in physical capital, similar study evaluating investments in people is barely beginning. It seems probable that such discrepancies in economic knowledge have surely affected decisions on the Nation's priorities and the allocation of resources. However, there is a growing body of evidence to the effect that yields from investment in people are as great if not greater than investments in machines and physical equipment.

The reasons that Federal programs for the development of human resources are needed are the same reasons that the programs themselves are difficult to analyze. First, many of the programs have substantial external effects, or in other words, their benefits are not limited to the primary participants. Second, many tend to improve resource mobility and raise market efficiency generally. Third, they often involve strong noneconomic considerations of equity and income distribution.

To what extent can economic calculus be applied to the area of human resource conservation and development? What are our national human resource objectives? Are existing programs effective in promoting these broad objectives? Which criteria are relevant in program evaluation? Can existing results be obtained more efficiently by alternative means? How can the decisionmaking process be improved? Can the Federal budget be organized more effectively? Is longer run budget planning feasible? How should "returns" and "costs" be conceptualized and to what extent can they be measured? What are the marginal net returns from resources devoted to human resource conservation and development programs, and how do these returns compare with those stemming from investment in physical capital?

The subcommittee hopes to give participants in this compendium an opportunity to look at where the United States is, where it is going, and how it can proceed efficiently in the area of human resource development. It is hoped that the contributors in so doing will provide perspective useful to Congress and will provide background materials for further study and hearings.

from 1950 through 1966.[3] In contrast, public expenditures for health and medical care amounted to only about one-quarter of the total.[4]

Within the public sector, the distribution of spending for human resources programs has shifted significantly. Between fiscal 1950 and fiscal 1966, the share accounted for by the Federal Government shifted from 43.5 to 53.4 percent, while the share accounted for by State and local governments fell from 56.5 to 46.5 percent.[5]

The initial report achieved gains in assembling, classifying, measuring, and describing the many programs, but left for future investigation the difficult tasks of refining the economic concepts that are dealt with, assessing economic effects of governmental programs, and projecting future requirements. As was pointed out in the report, it "does not offer a definitive analysis and systematic evaluation of the human resources programs of the U.S. Government. It provides, rather, a convenient compilation of pertinent materials that outlines the extent and contours of the area to be explored, indicates roughly the numbers of people affected by selected programs and the ways they are affected, and may serve as a starting point for future investigations." It serves mainly to suggest avenues for exploration and to demonstrate the need for better analysis in this field.

The analytical tasks remain largely uncharted. The responses of the Government agencies suggested diverse objectives and significant difficulty in conceptualizing or measuring the effectiveness of their programs. Moreover, the responses indicated that the agencies had not succeeded in measuring the scale and range of needs in their respective fields. These conditions make it very difficult to gage current efforts against reasonable requirements, or to assess results against potential achievement.

The Subcommittee on Economic Progress in this compendium and the hearings to follow is seeking new aids in decisionmaking in the important field of human resource development. The growing emphasis and the massive resources being devoted to this area require new paths of thinking and new analytical tools. It seems imperative that technical experts develop the capacity to look across the traditional boundaries of their specialties. For example, health and housing experts need to work in close cooperation with economists to determine the significant economic side effects of their programs. What are the interdependent effects? What are the alternative costs and methods of expanding health benefits or more adequate aid to dependent children? What are the implications of not expanding these particular programs? And what increased contribution can the private sector make?

Compendium Content

Part I of the compendium will be devoted to a general assessment of the development of human resources in the American economy. First, the subcommittee would welcome critical comments and suggestions concerning the recently completed report on *"Federal Programs for the Development of Human Resources."* In the light of the responses received, can the objectives be more sharply defined?

[3] In the category of "income maintenance" are included expenditures under organized income maintenance and welfare programs in the private sector—specifically private employee benefit plans and organized philanthropy but not individual annuities.

[4] *Federal Programs for the Development of Human Resources*, vol. I, table 1, pp. 8 and 10. The data came from Ida C. Merriam, "Social Welfare Expenditures, 1965-66," *Social Security Bulletin*, December 1966, pp. 9-21.

[5] *Federal Programs for the Development of Human Resources*, vol. I, table 2, p. 15.

The following comments are not designed to prescribe or limit discussion, but rather to give an indication of some of the subcommittee's concerns in this field.

BACKGROUND [1]

The subcommittee has completed one phase of its study of "Federal Programs for the Development of Human Resources." The study was undertaken to provide policymakers with systematic information on the extent of the jobs to be done, the availability of resources, the costs of various alternatives, and probable effects of the programs on the economy. The intent of our first phase was to classify and quantify the many Government programs directly affecting human resources, to anticipate the scope of the tasks to be accomplished, and to estimate the probable size of the public and private programs in the next 5 years. In addition, an initial attempt was made to assess the economic impact of the programs.

Included within the scope of the study were programs which the various departments and agencies, in response to a questionnaire from the subcommittee in September 1965, identified as primarily concerned with the support or development of people in the United States. Major categories identified in the report encompassed programs for environmental improvement, education and training, health care and improvements and income maintenance and family support. The staff analysis contained in volume I focused on the size and effect of expenditures in each of these functional categories. The application of cost-benefit analysis to human resources programs, as well as the significance of the planning-programing-budgeting system, was also discussed.

Federal Government expenditures for human resources programs, as defined for purposes of the survey,[2] totaled approximately $43.6 billion in fiscal 1965. This magnitude accounted for approximately 37 percent of total Federal expenditures for that year on a national income accounts basis. More than half of these expenditures were made by the Department of Health, Education, and Welfare, or $23.1 billion. Old-age, survivors, and disability insurance payments alone accounted for $17 billion.

The staff analysis of part I gives some perspective to the estimates of total expenditures by examining the historical breakdown between public and private spending and between Federal as opposed to State and local spending. While total expenditures for health, education, social insurance, and welfare in the United States have increased in both absolute and percentage terms, relative to gross national product, the distribution between public and private spending was approximately the same in 1966 as in 1950, or about two-thirds and one-third. However, the distribution of expenditures varied as among program categories. For example, in the case of income maintenance and welfare, public programs accounted for at least 85 percent of total public and private spending for each year for which data are available

[1] The Joint Economic Committee has been actively concerned with problems relating to human resources for almost two decades. A listing of related reports and hearings may be found on p. 9.

[2] In the survey, human resources programs were broadly defined. The questionnaire stated that "The test for inclusion is that the programs are directed primarily toward maintenance or development of people in the United States or, alternatively, have as a secondary effect a substantial impact on the development of human resources." Inquiry Relating to Human Resource Programs, Subcommittee on Economic Progress of the Joint Economic Committee, 1965.

from 1950 through 1966.[3] In contrast, public expenditures for health and medical care amounted to only about one-quarter of the total.[4]

Within the public sector, the distribution of spending for human resources programs has shifted significantly. Between fiscal 1950 and fiscal 1966, the share accounted for by the Federal Government shifted from 43.5 to 53.4 percent, while the share accounted for by State and local governments fell from 56.5 to 46.5 percent.[5]

The initial report achieved gains in assembling, classifying, measuring, and describing the many programs, but left for future investigation the difficult tasks of refining the economic concepts that are dealt with, assessing economic effects of governmental programs, and projecting future requirements. As was pointed out in the report, it "does not offer a definitive analysis and systematic evaluation of the human resources programs of the U.S. Government. It provides, rather, a convenient compilation of pertinent materials that outlines the extent and contours of the area to be explored, indicates roughly the numbers of people affected by selected programs and the ways they are affected, and may serve as a starting point for future investigations." It serves mainly to suggest avenues for exploration and to demonstrate the need for better analysis in this field.

The analytical tasks remain largely uncharted. The responses of the Government agencies suggested diverse objectives and significant difficulty in conceptualizing or measuring the effectiveness of their programs. Moreover, the responses indicated that the agencies had not succeeded in measuring the scale and range of needs in their respective fields. These conditions make it very difficult to gage current efforts against reasonable requirements, or to assess results against potential achievement.

The Subcommittee on Economic Progress in this compendium and the hearings to follow is seeking new aids in decisionmaking in the important field of human resource development. The growing emphasis and the massive resources being devoted to this area require new paths of thinking and new analytical tools. It seems imperative that technical experts develop the capacity to look across the traditional boundaries of their specialties. For example, health and housing experts need to work in close cooperation with economists to determine the significant economic side effects of their programs. What are the interdependent effects? What are the alternative costs and methods of expanding health benefits or more adequate aid to dependent children? What are the implications of not expanding these particular programs? And what increased contribution can the private sector make?

Compendium Content

Part I of the compendium will be devoted to a general assessment of the development of human resources in the American economy. First, the subcommittee would welcome critical comments and suggestions concerning the recently completed report on *"Federal Programs for the Development of Human Resources."* In the light of the responses received, can the objectives be more sharply defined?

[3] In the category of "income maintenance" are included expenditures under organized income maintenance and welfare programs in the private sector—specifically private employee benefit plans and organized philanthropy but not individual annuities.

[4] *Federal Programs for the Development of Human Resources*, vol. I, table 1, pp. 8 and 10. The data came from Ida C. Merriam, "Social Welfare Expenditures, 1965–66," *Social Security Bulletin*, December 1966, pp. 9–21.

[5] *Federal Programs for the Development of Human Resources*, vol. I, table 2, p. 15.

What is the meaning of the phrases "human resources" and "investment in people"? The subcommittee's questionnaire to the Government agencies indicated that the test for inclusion in the category of human resource programs is "that the programs are directed primarily toward the maintenance or development of people in the United States or, alternatively, have as a secondary effect a substantial impact on the development of our human resources." [6] The review of the materials supplied by the departments and agencies used four major program categories, based on their program function: (1) environmental improvement programs; (2) education and training programs; (3) health care and improvement programs; and (4) income maintenance and family support programs (p. 27). However, it was recognized at the outset that some other system of definition and classification might be preferable for some purposes.

The term "development of human resources" as used in this part, is broader than is usually implied by such phrases as "investment in human capital," which is limited to the "activities that influence future real income through the embedding of resources in people." [7] Resources may also be "embedded in people" to prevent socially negative results.

What are the national goals in the area of human resource development and how are these goals related to other national goals, such as price stability, economic growth, and equality of opportunity? The goals should be put in the perspective of the availability of resources. *For example, given other objectives, is it possible to "overinvest" in* education, or in health and medical care services? What are some possible time paths for achieving specified goals, given the Nation's potential for economic growth?

What progress has been made in human resource development and how can progress in this area be measured? What has been the growth in the stock of "human capital"? What have been the flows of education, training, and health care and improvement contributing to this stock? What are the differences between the flows of resources into this form of investment measured in constant prices contrasted with current prices? What are the resource bottlenecks?

How can efficiency be achieved in allocating resources among programs? How can priorities be established, and what are the tradeoffs? What alternative methods are there, and how can such techniques as program planning and budgeting assist in the decision-making process? What sorts of tasks can best be accomplished by the private sector? What are the effects of program financing on resource allocation and growth?

How are, or should, public and private institutions be designed to promote human resource development? What is the process by which an idea in the area of social innovation is financed and put into practice? Are the motivations of the parties involved such that different groups work at cross purposes? For example, many programs involve Federal, State and local governments and the private sector. In such circumstances, problems of defining and harmonizing diverse objectives may be greatly compounded, and inconsistencies may appear in the formulation, organization, and administration of interrelated programs.

---

[6] *Federal Programs for the Development of Human Resources*, p. 105.
[7] Gary S. Becker, "Investment in Human Capital; A Theoretical Analysis," *Journal of Political Economy*, Supplement; Oct. 1, 1962, p. 9.

There will be five parts to the compendium. After the general reconnaissance of part I, part II will be concerned with education and training needs and programs, part III with income maintenance and family support, part IV with health care and improvement, and part V with environmental improvement.

PART II of the compendium will provide for a more detailed examination of programs in the area of education, training, and the matching of jobs and people. Although it did not begin suddenly, a new era in employment policy has developed. Increasingly, attention is turning from the quantity of jobs to the quality of economic opportunity. Education and manpower programs are now in operation, designed to aid not only in matching men and work, but in upgrading the quality of the labor force. Manpower policy stresses more than simply providing a job. It focuses on the opportunities that the job offers for self development. Federal policies for promoting full employment are focusing not only the need for creating and maintaining conditions favorable for employment opportunities and with promoting maximum employment, but also on the full development of human potential. Manpower policies are an essential instrument of full employment policy at the present time.

The first problem raised is that of establishing an inventory of education and training needs which are not now being met. How large are the groups who are functioning below their potential because of unemployment, underemployment, and nonparticipation in the labor force for reasons of inadequate preparation or discrimination? What are the real costs to society of these conditions? What is the size of the investment required and how long will it take to correct these deficiencies? What would be the costs and returns of corrective programs?

How can the design of programs for meeting education and training needs be improved? What are the public and private roles? From the standpoint of economic growth and efficiency, what is the relative importance of vocational and job-related training on the one hand and general education on the other? What is the role of military training and education? Does the present structure of Government programs correspond to this evaluation? Are there significant gaps in our system of training? To what extent and how efficiently can program gaps be met by expanding existing programs, or introducing such proposals as (1) Government guarantee of training opportunities, (2) business tax incentives for retraining the structurally unemployed, (3) wage subsidies for handicapped workers, and (4) the role of the Government as an employer?

What are the economic effects of education, training, and mobility programs? What are the effects of selected types of programs on income distribution and on economic efficiency? What are the "spillover" or "external effects" of these programs in regard to the local community and the Nation? How do these programs affect economic growth? Can they raise "market efficiency" and thereby improve the tradeoff between lowering the unemployment rate and maintaining price stability? How significantly did retraining contribute to the decline in unemployment after 1963? What is required to reduce the unemployment rate from its present level to 3½ and then 3 percent?

PART III is concerned with the economics of income maintenance and family support.[8] How can these programs be meaningfully categorized? Some are based on insurance principles and the benefits are considered "earned," while the benefits of others are based primarily on need, whether demonstrated or presumptive. Need is not a necessary requirement for receipt of social insurance payments; however, the meeting of economic hardship is a major objective of the programs. On the other hand, public assistance payments are based almost entirely on specific need attributes.

To what extent do income maintenance and family support programs represent an investment and to what extent do they contribute to current consumption without adding to potential future levels of output? Do income transfers promote economic efficiency and growth? To what extent do they promote economic stability? Does the additional security provided make workers more or less productive? Are there some types of payments which impede economic growth and resource mobility while others raise future national economic potential? What are the results if too little or too much is spent for income maintenance and family support?

What are the debilitating effects of poverty on the economy? For example, children who grow up in the midst of poverty often do not acquire the training, attitudes, and opportunities that will enable them to be productive members of society when they reach maturity. How many children are in this category? What are reasonable assumptions about the implication of growing up in poverty on their lifetime earnings, their economic returns to the community, and their net economic contribution to Government?

What is the resource gap between present incomes of the poor and some reasonably adequate standard? How acute as well as how large is the variation among States and among different types of communities in assistance levels? Are there persons whom the averages hide, and who indeed have grossly inadequate resources for food and clothing?

If the decision is made to mitigate poverty, three basic strategies suggest themselves: (1) Helping those who have the potential to develop their own human resources to the point that they have enough to sell in the market to bring themselves over the poverty line; (2) providing income assistance or assistance in kind to those who do not have the economic potential; and (3) some combination of the above choices.

In reference to strategies (2) and (3) above, can and should our income assistance programs move significantly from categorical to more general types of assistance? What are the implications on program cost, incentives, and welfare of alternative courses of action—for example, the negative income tax proposal or a guaranteed income floor for all persons or all persons who cannot, for reasons of age or health, be in the labor force?

PART IV is concerned with the economics of health care and improvement programs. At least five broad types of programs may be distinguished: care and treatment of the ill; the prevention of illness; medical research; the training of medical manpower; and the

[8] The Joint Economic Committee's Subcommittee on Fiscal Policy has invited experts to prepare papers for a symposium on old age income assurance in order to make available to a wide audience current thinking on problems in private and public pension programs and related programs whose objectives include old age income assurance.

building of medical facilities. Some of the Government programs in the health field may stimulate the demand for medical services, while others may stimulate the supply of medical services. Is the relative emphasis between these two types of measures appropriate? Dollar amounts devoted to medical care have certainly risen relatively as a share of consumer incomes and expenditures. But there have been substantial price effects so that the "real resources" devoted to this area have been quite different. To what extent are these price advances attracting additional resources and to what extent do they represent monopoly returns? What are the potential returns from productivity advances in this sector? Or must the rising demand be met entirely by rising prices and more resources?

Are the people of the United States receiving reasonably adequate medical care? Of course, "reasonably adequate" is difficult to define, but perhaps some indication can be gained by comparing the general average to the health indexes of particular areas and groups.

What is the economic cost of the significantly higher death rates among Negroes, Indians, and perhaps other groups? What is the cost of area differentials in health care which are not associated with race? What are the costs of absenteeism from work and the major causes? How large are investments in occupational health and of what magnitude is the economic loss resulting from occupational hazards?

From the standpoint of consumption, the price mechanism signals that more health services are demanded as a nation develops, and as family incomes increase. However, health services also contribute to the growth process. Although there has been relatively wide discussion of the contribution of investments in health to the economic development of underdeveloped countries, there has been relatively little discussion of optimal health programs for the further economic development of advanced nations.

Job performance is correlated with workers' health. Absenteeism and employees' health insurance add substantially to the costs of doing business. Moreover, the cost in production forgone of ill or injured workers may be even greater in an economically advanced country than in a developing country. In early development if a worker becomes ill or injured, there are many more young and healthy workers to take his place in the industrial sector. That is, the alternative cost is relatively low. But when high proportions of the population are productively employed, the cost of replacing a typical sick or injured worker may be much greater. What are the marginal returns of resources devoted to the prevention and treatment of illness and injuries? To what extent can benefit-cost ratios assist in making this analysis?

In the field of medical research, which diseases should receive how much study? Which are the most costly to the families involved and to the nation? Should relatively more resources be devoted to the dissemination of research results or to research itself? Is maximum use being made of modern methods of communication and data transmission? Should more funds be devoted to medical research versus other types of research or would additional funds merely result in increased research costs, particularly in the form of higher salaries?

PART V is concerned with the economics of environmental improvement.[9] As an economy becomes highly industrialized, it may be necessary to devote more effort and more resources to overcoming the adverse side effects of the growth process itself.

What are the effects of environmental factors on labor efficiency? Is it possible to isolate the adverse effects on productivity of poor housing, inadequate recreation facilities, and noisy, dirty, unsafe streets? Should more research be undertaken to predict or warn against possible adverse environmental effects of particular technologies or of simply crowding?

So far, most economic analysis has involved resources with positive values. Input-output analysis has been in terms of the transformation of resources to finished goods without extensive analysis of the by-products which have negative value. Is it possible to generalize about the extent and growth of resources needed to counter the harmful effects on the environment as a result of production processes?

Pollution prevention measures have costs as well as benefits. How extensive are the net costs to businesses of devices to prevent pollution? How rapidly are these costs likely to increase during the next decade? What criteria should determine whether a particular anti-pollution measure should be adopted, and who should bear the cost? What form should pollution controls take? For example, should minimum standards be established, or should results be sought through a system of taxes and incentives?

[9] The Joint Economic Committee's Subcommittee on Urban Affairs is conducting a long-range investigation of problems of our urban environment. As a first step, it has invited experts to contribute papers to form a compendium to be followed by hearings in the early fall of 1967.

Joint Economic Committee Reports and Hearings Relating to Human Resources

Selected Government Programs Which Aid the Unemployed and Low-Income Families. Staff study, November 1949.
Low-Income Families and Economic Stability. Staff study, September 1950.
Low-Income Families. Hearings, December 1949.
Low-Income Families and Economic Stability. Report, March 1950.
Employment and Unemployment. Report, February 1950.
Underemployment or Rural Families. Staff study, February 1951.
Making Ends Meet on Less than $2,000 a Year: Case Studies of 100 Low-Income Families, March 1952.
Employment and Unemployment Statistics. Hearings, November 1955.
Characteristics of the Low-Income Population and Related Federal Programs. Staff study, October 1955.
Low-Income Families. Hearings, November 1955.
A Program for the Low-Income Population at Substandard Levels of Living. Report, January 1966.
Historical and Comparative Rates of Labor Force, Employment and Unemployment. April 1959.
The Extent and Nature of Frictional Unemployment, by the Bureau of Labor Statistics, November 1959.
The Low-Income Population and Economic Growth, by Robert L. Lampman, December 1959.
The Adequacy of Resources for Economic Growth in the United States, by Joseph L. Fisher and Edward Boorstein, December 1959.
The Structure of Unemployment in Areas of Substantial Labor Surplus, by the Bureau of Labor Statistics, January 1960.
Economic Programs for Labor Surplus Areas in Selected Countries of Western Europe. Staff study, December 1960.
Higher Unemployment Rates, 1957–60: Structural Transformation or Inadequate Demand. Staff study, November 1961.
Unemployment: Terminology, Measurement, and Analysis. Study Papers, November 1961.
Employment and Unemployment. Hearings, December 1961.
Employment and Unemployment. Report, February 1962.
State of the Economy and Policies for Full Employment. Hearings, August 1962.
Measuring Employment and Unemployment. Hearings, June 1960.
The Distribution of Personal Income. Staff study, December 1964.
Technology in Education. Hearings, June 1966.
Automation and Technology in Education. Report, August 1966.
Old Age Income Assurance: An Outline of Issues and Alternatives. Staff document, November 1966.
Federal Programs for the Development of Human Resources. A Compilation of Replies from Departments and Agencies of the U.S. Government to a Questionnaire Formulated by the Subcommittee on Economic Progress, December 1966.

Compendium Outline

PART I

Assessment of the Development of Human Resources in the American Economy and Goals for 1975

I. Human resource goals, or from a policy of high employment to one of full realization of human potential; the relation between economic growth and human resource goals; the allocation of resources among competing goals.
II. Measures of "investment" in human resources.
III. Methods of program evaluation; criteria; comparisons of alternative means, including those of the private sector.
IV. The design and operation of programs for human resource development; the formulation process, the organization of programs, techniques for improved decisionmaking, the compatibility of objectives and incentives.

PART II

Education and Training: Needs and Programs

I. The dimensions of the problem: an inventory of education and training needs; economic loss of underutilized human resources;
   A. Need inventory and required resources.
   B. The measurement and extent of underemployment: the special employment situations of women, nonwhites, and the problem of phasing the young into the job market and the old out; the required resources for alleviating these difficulties.
II. The design of programs for meeting education and training goals; the role of public and private sectors; the structure and emphasis of programs for employment preparation; program adequacy at present and in 1975; relevant foreign experience.
III. Evaluation of the economic effects of the programs:
   A. Benefit-cost.
   B. Distribution.
   C. Market efficiency.
   D. Economic growth.
   E. Financing.

PART III

Income Maintenance and Family Support: Resource Requirements and Programs

I. Definition of the problem: Its dimensions; the income gap (variously defined); the debilitating effect of poverty (present and future) on the economy.
II. The design of programs of income assistance:
   A. Categorical versus general programs.
   B. Regional variations in assistance levels.

III. Economic evaluation of programs:
  A. Consumption distinguished from investment aspects.
  B. Intergeneration effects on earning power.
  C. Positive and negative effects on incentives.
  D. Effect on economic and social mobility.
  E. Effect on worker productivity and labor cost.
  F. Effect on economic stability and growth.

PART IV

HEALTH CARE AND IMPROVEMENT: NEEDS AND PROGRAMS

I. Relationship of health factors to economic efficiency and growth:
  A. Health programs and labor efficiency.
  B. Benefit-cost analysis of health programs.
  C. The allocation of research among diseases.
II. The adequacy and distribution of medical care.
III. Economic evaluation of programs:
  A. Supply-stimulating programs.
  B. Demand-stimulating programs.

PART V

ENVIRONMENTAL IMPROVEMENT

I. The effects of environmental factors on labor efficiency.
II. External effects of industrial debris, and air, and water pollution:
  A. Consumer welfare, health, and safety.
  B. Producer costs.
  C. Community services.
III. The relationship between economic growth and human environment:
  A. Effects of economic growth on environment—specification of effects and community costs.
  B. Effects of environmental pollution on economic growth.
IV. Investment in pollution prevention:
  A. Effects on business cost.
  B. Measuring the returns to the consumer, firm, and community.
  C. Financing.

ERIC Clearinghouse
MAR 3 1968
on Adult Education